

Notice of Allowability

Application No.

10/619,710

Examiner

Peter J. Vrettakos

Applicant(s)

HOWELL, THOMAS A.

Art Unit

3739

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 6-17-05.
2. ☒ The allowed claim(s) is/are 5-9, 12-14, and 16-24.
3. ☒ The drawings filed on 14 July 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 7/14/3;9/26/3
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with David Crockett on 7-7-05.

The application has been amended as follows:

1. Claims 1-4, 10-11, and 15 are deleted.
2. Claim 5 now reads:

A system for performing thermal cautery system on body tissue, said system comprising:

a thermal cautery device, said thermal cautery device comprising a resistive heating element mounted on means for pressing the resistive heating element into contact with body tissue;

a switching power supply; and

a control system comprising a means for operably connecting the switching power supply to the resistive heating element to provide power to the resistive heating element; and

a means for identifying the thermal cautery device connected to the switching power supply, wherein the control system controls operation of the thermal cautery device based on the identity of the thermal cautery device; and

wherein the means for identifying the thermal cautery device comprises:

an identification resistor electrically connected to the thermal cautery device, said identification resistor having a pre-determined resistance value; and

a reference resistor placed in series with the identification resistor when the thermal cautery device is electrically connected to the switching power supply, said reference resistor also electrically connected to ground such that an identifying voltage develops across the reference resistor when power is applied to the reference resistor and the identification resistor; and

a comparison resistor electrically connected to the switching power supply and to ground, wherein a reference voltage develops across the comparison resistor when power is applied to the comparison resistor; and

a comparator, wherein the positive terminal of the comparator is electrically connected to the identifying voltage and the negative terminal of the comparator is electrically connected to the reference voltage; wherein the comparator produces an output signal if the identifying voltage is higher than the reference voltage, said output signal indicating that a particular thermal cautery device is operably connected to the power supply.

3. Claim 14 now reads:

A system for performing thermal cautery, said system comprising:

a thermal cautery device, said thermal cautery device comprising a resistive heating element mounted on means for pressing the resistive heating element into contact with body tissue; and

a means for providing a constant current;

and a means for operably connecting the resistive heating element to the means for providing a constant current in order to provide a constant current to the resistive heating element when power is applied to the system; and

wherein the means for providing a constant current comprises: a power source, wherein the resistive heating element of the thermal cautery device is electrically connected to the power source and to the drain of a power MOSFET; and a sense resistor electrically connected to the source of the power MOSFET and to ground, wherein a sense voltage develops across the sense resistor when power is applied to the sense resistor; and an operational amplifier, wherein the output of the operational amplifier is electrically connected to the gate of the power MOSFET, wherein the negative terminal of the operational amplifier is electrically connected to the sense voltage, and wherein the positive terminal of the

operational amplifier is electrically connected to a control voltage such that when power applied to the system the circuit will adjust the current until the sense voltage equals the control voltage.

The Examiner's amendment simply places the allowable language of prior claims 10-11 into independent claim 5, and claim 15 into independent claim 14. As a result, claims 5-9, 12-14, and 16-24 are pending. **Claims 5 and 15 are sole independent claims.**

The following is an examiner's statement of reasons for allowance: The prior art neglects to disclose a means for identifying a thermal cautery device with a reference resistor, identification resistor, and a comparison resistor in the context found in **independent claim 5**. The prior art neglects to disclose a thermal cautery device with a resistive heating element electrically connected to the drain of a power MOSFET and to ground, as well as an operational amplifier electrically connected to a sense voltage in the context found in **independent claim 15**.

A terminal disclaimer has been filed of 6,695,837 in 7-6-05.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter J. Vrettakos whose telephone number is 571-272-4775. The examiner can normally be reached on M-F 9-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Linda C. Dvorak can be reached on 571-272-4764. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Pete Vrettakos
July 7, 2005



MICHAEL PEFFLEY
PRIMARY EXAMINER